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ABSTRACT

This congressional report argues that the costs of the current guaranteed lending program for postsecondary education can be reduced in three ways: (1) by eliminating more-than-competitive returns to private lenders; (2) by reducing administrative costs; and (3) by reducing default costs. It is suggested that the first solution can be accomplished with or without direct lending but that administrative costs are more likely to be increased than decreased by direct lending. The third solution--reducing default costs--is advanced by explicit understanding that subsidies intended to produce benefits to society cannot be repaid by students who fail to receive gains from the investment commensurate with its cost. Cost reductions in such cases cannot be accomplished either by direct or guaranteed private lending, thus bringing about certain loan restrictions and a separate subsidy structure such as grants or income contingent repayment plans. The report argues that if the current program were providing competitive returns to lenders, national income would not be increased by conversion to a direct lending program; budget "savings" would amount to no more than the failure of federal bookkeeping to record outlays for taxpayers' absorption of risk, and any increased funding available for public spending would be exactly offset by reduced private sector income. (GLR)

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CRS Report for Congress

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Federal Family Education Loans: Reduced Costs, Direct Lending, and National Income

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February 22, 1993

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FEDERAL FAMILY EDUCATION LOANS: REDUCED COSTS, DIRECT LENDING, AND NATIONAL INCOME

SUMMARY

The proposal to convert the current guaranteed student loan program to direct Federal lending aims to reduce budget outlays and increase national income. If, however, the current program structure provides lenders a competitive return, there are neither real budget savings nor national income increases from conversion to direct lending. Any increased funding available for public spending would be exactly offset by reduced private sector income. This shift of lenders' net income to the public sector would not be a budget gain, for it represents nothing more than the failure of Federal bookkeeping to record outlays for taxpayers' absorption of risk. National income would not be increased: no loanable funds would be freed to increase output and wealth.

If the current system provides private lenders with a more-than-competitive rate of return, budget savings and national income increases can be captured with direct lending, but also can be achieved by adjusting the current program structure.

Direct lending actually could increase budget outlays and reduce national income if it were unable to duplicate administrative cost efficiencies achieved by private lenders. These cost efficiencies (primarily in loan servicing) and the more-than-competitive rates of return are the sources of the high profits some claim are made by private lenders. An alternative to direct lending might be to alter current program interest rates more rapidly to share the benefits of this successful private sector cost reduction. Prospects for effective oversight might be enhanced if the Student Loan Marketing Association's responsibilities to Federal taxpayers, implicit in its Federal charter and resulting ability to borrow at near the Federal rate, were more clearly established.

Regardless of the loan delivery system, real economic gains could be made by targeting the program differently. Loans probably are made too often for investments beyond what is profitable for the student: the recipients' rate of return from investment is lower than the subsidized interest rate they must pay. Default costs could be reduced if schools paid a share of these costs their students impose on the Federal Government. This would provide an incentive for schools to base loans not only on student income, but also on information on student prospects for success that is available via the admissions process. High defaults may be defensible if they generate substantial "external" benefits to society, in which case defaults are better thought of as normal program costs. External benefits, however, are normally associated more with elementary and secondary education. Postsecondary students whose subsidized investments produce benefits for society but not for themselves might better be assisted through grants or income-contingent repayments.

Program costs also might be reduced by limiting the number of loans for investments with rates of return exceeding the unsubsidized cost of postsecondary loans; these investments will occur without the Federal Government's assistance. Such "wasted" program costs are most likely to appear in the SLS, PLUS, and Stafford unsubsidized loan programs, which are not needs tested.

CONTENTS

I. FFEL PROGRAM RATIONALES, STRUCTURE, AND OPERATION .. 2
A. PROGRAM RATIONALES 2
1. Capital Market Failure 2
2. Externalities 3
B. STRUCTURE 4
C. OPERATIONS 5
1. Loan Origination 5
2. Guarantees 5
3. Reinsurance Servicing 6
4. Investment 6
5. Loan Servicing 7

II. THE MARKET FOR POSTSECONDARY EDUCATION LOANS 7

III. DIRECT LOANS: BUDGET OUTLAYS
AND NATIONAL INCOME 9
A. INTEREST OUTLAYS 10
1. Lenders Receive a Competitive Return 10
2. Lenders Receive a More-than-Competitive Return 13
a. Congressional Actions 14
b. Lender Behavior 15
c. Risk-Adjusted Spreads 16
B. ADMINISTRATIVE OUTLAYS 20

IV. REDUCING COSTS THROUGH BETTER TARGETING 22
A. LOANS WITH HIGH DEFAULT RISK 23
B. LOANS THAT REPLACE PRIVATE CAPITAL 26

V. CONCLUSION 27

FEDERAL FAMILY EDUCATION LOANS: REDUCED COSTS, DIRECT LENDING AND NATIONAL INCOME

The Federal Government's loan guarantee program for postsecondary education was established in 1965, adjusted numerous times as recently as 1992, and is now called the Federal Family Education Loan (FFEL) program. This Government guaranteed private lending program is subject to a variety of complaints—program costs are inflated by high default rates and excessive interest subsidies; the loan delivery system is complex; and the program does not serve adequately the needs of the target population.

It has been suggested that substitution of direct Federal lending for the current system of guaranteed private loans would reduce program costs. [1] This report evaluates the impact such a substitution might have on Federal outlays for interest and administrative expenses under two scenarios—that lenders receive a competitive return, and that lenders receive a more-than-competitive return. Potential cost reduction from more careful targeting is also discussed. Particular attention is paid in this report to the distinction between the impact of program restructuring on national income versus the impact on the Federal Government's budget.

This report concludes that the current guaranteed student loan programs are inefficient and cannot be fixed by simple conversion to a direct loan program, however inviting such a proposal might appear. Conversion to direct loans cannot be justified on the basis of either budget savings or increases in overall economic welfare. It is true that high program costs are affected by the parameters of the current program, for example, in its provision of a more-than-competitive rate of return to lenders. This can be corrected, however, within the confines of the current program structure.

Substantial economic and budget costs also stem from loan defaults. Controlling default costs requires a reexamination of the policy which overlays subsidies to correct for capital market imperfections with those intended to produce external benefits. Future public policy might consider stronger support

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[1] For a discussion of direct lending and related issues, see General Accounting Office. *Potential Savings from Direct Student Loans*. GAO/HRD-93-27. November 1992; and National Commission on Responsibilities for Financing Postsecondary Education. *Making College Affordable Again: Final Report*. February 1993. A sample of congressional hearings and reports includes: U.S. Congress. House. Committee on Education and Labor. *Report on the Higher Education Amendments of 1992*. 102d Cong., 2d sess.; U.S. Congress. Senate. Committee on Labor and Human Resources. *Hearing on Federal Direct Student Loans*. 102d Cong., 2d sess.; Senate. Committee on Labor and Human Resources. *Report on Reauthorizing the Higher Education Act of 1965*. 102d Cong., 1st sess.

for elementary and secondary education—the levels at which the external benefit to society is likelier to be of significant value. They are also the level at which investment is more likely be beneficial for students who would receive little more from the current program than a legacy of substantial indebtedness.

I. FFEL PROGRAM RATIONALES, STRUCTURE, AND OPERATION

This section is divided into brief descriptions of (A) the rationales for subsidizing postsecondary loans, (B) the structure of the FFEL programs, and (C) the operations carried out to deliver loans to students.

A. PROGRAM RATIONALES

Federal subsidy of postsecondary education through FFEL programs is most often justified either as a correction for capital market failure or the presence of externalities. Discussion of these rationales is useful because it provides insight into possibilities for program cost reduction.

1. Capital Market Failure

Many students find themselves unable to finance their postsecondary education from personal and family savings. Student mobility and a lack of property to pledge as loan collateral require that commercial lenders charge high interest rates on loans for postsecondary education to reflect their high risk of default. As a result, students often find themselves unable to afford postsecondary loans from the financial sector. This is unfortunate for the Nation because many of these students might be expected to earn a rate of return on postsecondary education loans that is higher than the rate of return earned on the alternative loans made by the financial sector.

This "failure" of the capital markets to allocate the Nation's savings to investments earning the highest return is attributable to the legal restriction against pledging an individual's future labor supply as loan collateral, that is, against indentured servitude. Since allowing indentured servitude is neither desirable nor feasible, the Federal Government pursues an alternative strategy to correct this market failure—a guarantee to absorb most of the financial sector's default risk associated with postsecondary loans to students. [2]

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[2] Through the mid-1980s, regulatory restrictions on interstate banking limited loan availability for students in States with poorly developed capital markets. This situation was used to justify postsecondary loan guarantees both at the State and Federal level. Deregulation of the banking system in the 1980s established regional branch-banking networks and bank holding companies that reduced the extent of this problem. A summary and compendium of the States' interstate banking laws is available in U.S. Library of Congress. Congressional

(continued...)

2. Externalities

The guaranteed student loan program provides students not only with a subsidy to correct for the capital market imperfection discussed above, but also with an additional interest rate subsidy whose objective might be viewed as stimulating external benefits. It is thought that these "external benefits" will be underprovided unless students are induced by a public subsidy to invest additional amounts in their own education.

External benefits are variously described as taking the form of better citizenship, increased productivity generated by knowledge, and lowered transfer payments. Their value is largely undocumented, although the Nation's social support system makes apparent the potential budget savings from ensuring that citizens have sufficient skills to be productive members of the work force. [3] Many argue, however, that in current circumstances most of these external benefits are generated primarily from investment in elementary and secondary education, whereas postsecondary education's benefits are primarily private and accrue to the individual rather than to society. [4] If this is the case, the external benefits rationale implies subsidy of elementary and secondary education, not postsecondary education.

The analysis presented in this report suggests, among other things, that students whose preparation for postsecondary education is inadequate are at a high risk of defaulting on loans, and denying such loans might be a reasonable approach to reducing FFEL program costs. This analysis does not ignore the potential reduction in the social support system's future budget outlays that might be generated by additional postsecondary education investments. What is suggested is that many of these borrowers are unlikely to be successful postsecondary students, and, therefore, are likely to require future social support budget outlays anyway. Including such students in a postsecondary subsidized loan program may not be beneficial to the student, whose increased earnings, if any, are not sufficient to pay associated debts; and may not be as beneficial to the Nation as increased investment in elementary and secondary education.

Most of the report focuses on the effects of the component of the guaranteed loan subsidy that corrects for the capital market imperfection. The

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[2](...continued)
Research Service. *Bank Mergers and Interstate Banking: Policy Issues*. Report 92-305 E by William Jackson, March 24, 1992.

[3] W. Lee Hansen and Burton Weisbrod. *Benefits, Costs, and Finance of Public Higher Education*. Chicago: Markham Publishing Co., 1969, 36-40.

[4] See for example, Milton Friedman. *Capitalism and Freedom*. Chicago: University of Chicago Press. 1962.

external benefits component of the subsidy is revisited in section IV on improved targeting.

B. STRUCTURE

Four types of FFEL loans are available to students. All four have three common characteristics: a guarantee to the lender against loss through borrower default; a guarantee to the lender of a competitive return; and a guarantee to the student that the interest rate will not rise above a specified rate. The competitive return is assured by a Special Allowance Payment (SAP), a fixed margin added to the 91-day Treasury bill rate, and paid by the Federal Government whenever the student borrowing rate rises above the ceiling rate. To the extent that the Federal Government does not charge a fee that covers the cost of these guarantees, all four programs are subsidized even though only one is explicitly referred to as subsidized.

Stafford subsidized loans are available to financially needy undergraduate, graduate, and professional students. The Federal Government pays the competitive return while the student is in school, during a 6-month grace period thereafter, and during periods of loan deferment, as well as the difference between a competitive return and the student's interest rate during the student repayment period. These loans amounted to 76.3 percent of all FFEL loan principal guaranteed during fiscal year (FY) 1992. [5]

Stafford unsubsidized loans are available for the same student population, but do not require a financial needs test. Lenders and secondary market purchasers receive the same two guarantees. The interest payments are not made on the student's behalf during the in-school period, but rather are added to the loan principal to be repaid by the student after the in-school period. These loans first became available in FY 1993. Supplemental Loans for Students (SLS) differ from Stafford unsubsidized loans in that they are available only to students independent of parental support. Parent Loans for Undergraduate Students (PLUS) are similar in most characteristics to SLS loans, but are available to parents without negative credit history who have dependent students, without regard to financial need.

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[5] U.S. Department of Education. *Loan Volume Update* All 12 Months of FY 1992. Guaranteed Student Loan Programs: Stafford/SLS/PLUS.* Prepared by Office of Student Financial Assistance [1992]. For a more comprehensive description of the FFEL program, see U.S. Library of Congress. Congressional Research Service. *Federal Family Education Loans: A Program Description.* Report 93-149 EPW, by Charlotte Jones Fraas, January 11, 1993.

C. OPERATIONS

The FFEL program combines the efforts of six distinct groups to deliver subsidized loans to students: students, schools, commercial lenders, guaranty agencies, secondary purchasers, and the Federal Government. Most discussions of the FFEL program proceed by describing each group's role. If direct lending were to be adopted, some of these participants would be eliminated even though the functions they perform would still be necessary. This report summarizes the program by describing the five functions that are performed to deliver guaranteed loans to students: loan origination; guarantees; reinsurance servicing; investment; and loan servicing. Since the focus of this report is the economics of the program, discussion of its institutional structure is very brief, and some readers may wish to consult other sources for more detailed information. [6]

1. Loan Origination

Loans to students are provided by the private financial sector, primarily commercial banks, savings and loan institutions, and credit unions. In most cases, the student never appears at the financial institution to apply for the loan. The application process, in effect a check on student eligibility (income, for Stafford subsidized loans), is handled by the school the student attends. Many schools have developed relationships with financial institutions to provide loans to any student approved by the school. Thus, these financial institutions are not serving their usual role of assessing individual borrower risks. The financial institutions' risk is affected by their choice of schools with which to do business. The commercial lender receives interest payments intended to be competitive with its alternative lending opportunities. A five percent "origination fee" is deducted from the loan principal and paid to the Federal Government (even though the commercial lender is the originator).

2. Guarantees

The Federal Government guarantees that the loans will be paid and receives the five percent "origination fee," an offset against Federal cost which some might view as a consideration for the guarantee. The convention among those who deal with this program is to attach the term "reinsurance" to this Federal guarantee. This term reflects the fact that lenders receive "insurance" on the loan from a State guaranty agency which, in turn, has an agreement with the Federal Government to reimburse it for defaulted principal and interest payments it makes to lenders. The Federal guarantee provides 100 percent reimbursement for each agency's annual defaults up to five percent of each agency's loans in repayment; reimbursement drops to 90 percent if annual

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[6] A discussion structured around participants appears in Congressional Budget Office. *The Experience of the Stafford Loan Program and Options for Change*. CBO Papers, December 1991.

defaults range from five to nine percent of loans in repayment; and reimbursement drops to 80 percent if annual defaults are above 9 percent of loans in repayment.

In addition to the default guarantee, the Federal Government guarantees the lender a competitive rate of return.

3. Reinsurance Servicing

The State guaranty agencies, or the private or nonprofit guaranty agencies designated by the State, receive a one-time insurance fee from each student borrower that can vary from zero to three percent of the loan principal guaranteed. In spite of their designation as "guaranty" agencies, their function is actually to service the guarantee being provided by the Federal Government. They ensure that the student is eligible for the loan, and that rules and procedures as prescribed by Federal regulation are exercised in pursuit of loan repayments. State guaranty agency funds are at risk only if the default rate on their insurance portfolio exceeds the five percent limit discussed above, or they do not exercise prescribed oversight to assure that lenders follow the proper rules and procedures in pursuit of repayment. [7] They may keep 30 percent of all collections on defaulted loans, an amount intended to cover administrative costs of collection, with the remainder remitted to the Federal Government.

4. Investment

Commercial banks, savings and loans, and credit unions originate the loans, but many of these institutions do not hold the loans in their investment portfolios. Often, the loans are sold to participants in a secondary market, which is dominated by the Student Loan Marketing Association (Sallie Mae, a Government sponsored enterprise [GSE] created specifically to purchase FFELs). Other secondary market participants include 42 tax-exempt State or nonprofit agencies, and a few large commercial banks. [8] This enables lenders to avoid the difficulties of loan servicing and provides them with additional loanable funds to make additional student loans. The primary lenders who sell Stafford loans typically hold them while the student is in school and loan servicing is relatively inexpensive because interest payments on the loan are being either made by the Federal Government or deferred and added to principal.

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[7] Only nine States exceeded the five percent limit at some time during FY 1991, and only 1.3 percent of all default claims were not reimbursed by the Federal Government. U.S. Department of Education. *FY 1991 Guaranteed Student Loan Program Data Book*. 1993. p. 50.

[8] As of September 30, 1990, Sallie Mae held 27.5 percent of outstanding guaranteed loans; the top 25 investors (including Sallie Mae) held 57 percent. U.S. Department of Education. *FY 1991 Guaranteed Student Loans Program Data Book*. ED/OPE91-19.

5. Loan Servicing

Most student loans tend to be for relatively small amounts of money (averaging $2,875 in FY 1992), which combined with the regulatory servicing burdens, mobility and uncertain income stream of recent postsecondary graduates and dropouts, makes student loan servicing expensive relative to other types of loans. Accordingly, this function has come to be dominated by firms that specialize in loan servicing and work on a contract basis with the lenders. Sallie Mae has also developed its loan servicing capabilities and uses them as a marketing tool to attract more loans for its investment portfolio.

II. THE MARKET FOR POSTSECONDARY EDUCATION LOANS

This section describes in some detail the market (demand and supply) for postsecondary education loans. This provides the background necessary to address the program cost issues that are the focus of the report.

The line labeled D in figure 1 represents the Nation's demand schedule for postsecondary loans, the sum of all potential students' desire to borrow to finance their postsecondary education. Notice that the schedule declines from left to right, which means that the expected rate of return decreases for each additional dollar invested in postsecondary education. The line labeled S_p represents the Nation's supply schedule of savings available to finance postsecondary loans, the sum of all lenders' willingness to make such loans. [9] Notice that the schedule rises from left to right, which means that the cost of borrowing increases for each additional dollar of borrowing. [10] These patterns apply to individuals and to borrowers as a group.

Assume that S_p represents the cost of borrowing varying amounts of savings in a world of perfect capital markets. Among other things, this means that students can offer indentured servitude as collateral on their education loans. D and S_p intersect at point "c" where borrowers and lenders mutually agree on an amount of borrowing Q_p at which the rate of return and cost of

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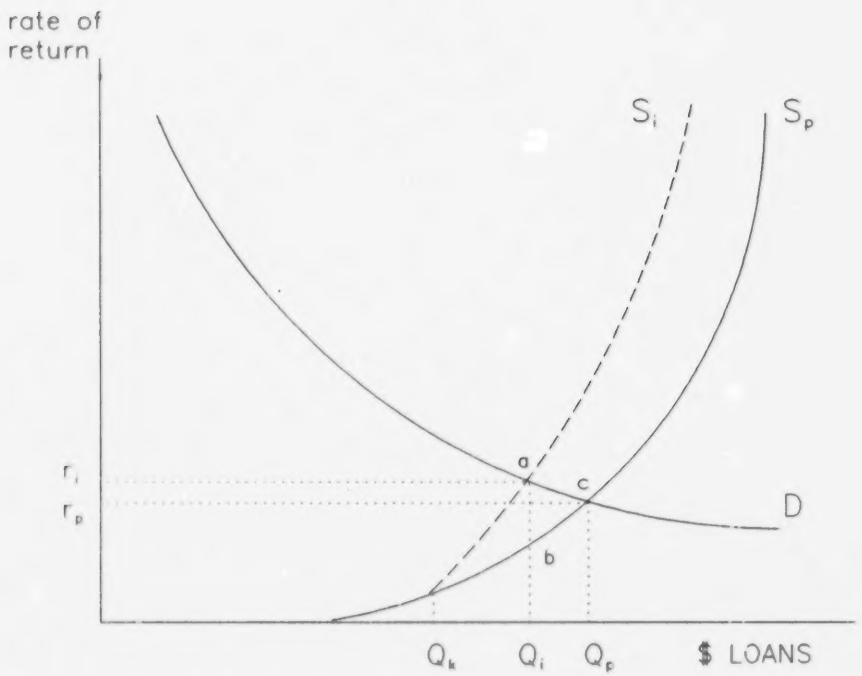
[9] The term "saving" as used in this report refers to the portion of the national income that is not spent on consumption. A substantial portion of personal and business saving is deposited in financial institutions such as commercial banks, savings and loan institutions, and credit unions in exchange for receipt of interest income. These institutions use these deposits (savings) to make loans to individuals and businesses who desire to engage in capital formation, that is, make investments. Loans for postsecondary education finance investments in human, rather than physical, capital.

[10] For an explanation of why the rate of return declines and borrowing cost increases as investment increases, see Gary Becker. *Human Capital*. New York: National Bureau of Economic Research, 1975, particularly chapter III.

FIGURE 1. The Market for Postsecondary Education Loans



borrowing are both equal to r_p. [11]

This Nation's legal system does not permit indentured servitude, thereby making students who are unable to offer physical or financial property as collateral for their loan a greater risk for lenders. Because of this higher probability of default, lenders' supply schedule for loans is actually represented by S_i, the dashed S curve in figure 1. This means a higher interest rate is charged for all loans to the right of Q_k than is suggested by S_p. D and S_i intersect at "a" where borrowers and lenders mutually agree on a lower amount of borrowing Q_i at a higher rate of return and cost of supplying funds, r_i.

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[11] No additional borrowing occurs because borrowers notice that borrowing in excess of Q_p will earn a lower rate of return than it costs to borrow the funds (notice the gap between S_p and D for loan amounts greater than Q_p). Nor will less than Q_p borrowing occur, because at points to its left the gap between D and S_p tells borrowers the rate of return exceeds the cost of the borrowing, making additional borrowing a profitable undertaking.

The diagram shows that, in order to achieve the optimal amount of lending, Q_p, it is necessary to subsidize postsecondary loans sufficiently to compensate lenders for their higher default risk and rotate the imperfect market supply curve S_i back down to S_p. The question arises as to why the Nation might consider this to be a reasonable thing to do.

The reasoning is fairly straightforward—reallocating some scarce saving from other uses to postsecondary education increases the Nation's welfare. How do we know this? The rate of return and contribution to national income of each dollar of savings devoted to education investment is measured off the demand curve D. The opportunity cost of the funds indicates what each dollar of savings would earn and contribute to the national income if used in its best non-education investment; this is measured off the supply curve S_p. For loan dollars Q_p - Q_i, the rate of return on the education investment exceeds the cost of the funds borrowed (the return the Nation must forego if those dollars of saving are used to make other investments). Reallocating these dollars of saving to postsecondary education allows the Nation to enjoy a welfare gain (higher national income) equal to the area bounded by points a, b, and c in figure 1.

This welfare gain can represent a considerable amount of income for the Nation. For example, were Q_p - Q_i to equal $10 billion of savings per year, the rate of return if used on education loans were to average 15 percent, and the cost of the funds were to average 10 percent, then the Nation's national income would be higher by $500 million per year ($10 billion of savings times the five percent difference between the rate of return and borrowing costs).

The FFEL program attempts to do precisely this. It absorbs the lender's default risk (the difference between S_i and S_p) and rotates the cost of funds from S_i to S_p. In addition, it provides an interest payment to commercial lenders that is intended to be just large enough to give them return r_p (even though the student pays a lower rate), which would be equal to the return they would earn if the loan dollars were invested in an alternative asset.

III. DIRECT LOANS: BUDGET OUTLAYS AND NATIONAL INCOME

A rapid rise in FFEL program costs, primarily in the form of default costs and interest subsidies, has spurred interest in alternative program structures that would reduce the costs of providing loans to students. [12] One approach that has received serious attention is substitution of direct Federal loans for the existing system of private loans guaranteed by the Federal Government. Proponents of a direct loan system suggest it would reduce costs by lowering outlays for interest expenses and by substituting an administratively simpler

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[12] Recent economic and legislative changes may result in substantially lower costs without restructuring. This is due to lower nominal interest rates and 1992 program changes which reduced the Federal subsidy and imposed new restrictions on schools whose students have defaulted at very high rates.

loan delivery system for the more complex system described in section I of this report. One analysis of potential reduced program costs from such a restructuring concluded:

> Substituting direct for guaranteed student loans could save the federal government about $4.8 billion for loans made in fiscal years 1994-98...Interest earnings from direct loans would allow the government to partially offset its cost of subsidizing students' interest expenses and supplying loan capital. The expected reductions in these costs would more than compensate for the government's start-up and higher administrative costs associated with direct lending. [13]

A. INTEREST OUTLAYS

This section explains why, if lenders receive a competitive return on loans, the reduction of Federal interest outlays that would accompany adoption of a direct lending program would neither reduce Federal budget outlays nor increase national income. [14] It also explains how, if lenders receive a more-than-competitive return, Federal budget outlays for interest could be reduced regardless of whether the current program is maintained or replaced with a direct lending program. Finally, it is suggested that budget outlays for administrative costs are likely to increase beyond what is currently being incurred by the private sector.

1. Lenders Receive a Competitive Return

The discussion is restricted to the Stafford subsidized loan portion of the FFEL program for two reasons. First, it is by far the largest program component, accounting for more than 75 percent of FFEL loan volume in 1992. Second, existing analyses of the impact of the direct loan alternative have focused on Stafford subsidized loans. The discussion here focuses on the period of time the student is in school, during which the Federal Government makes the entire interest payment, and ignores the repayment period after the student leaves school, during which the lender's interest receipts come partially from the student and partially from the Federal Government. Including the other FFEL programs and the repayment period of the Stafford subsidized loan program would complicate the discussion but would not change the conclusions.

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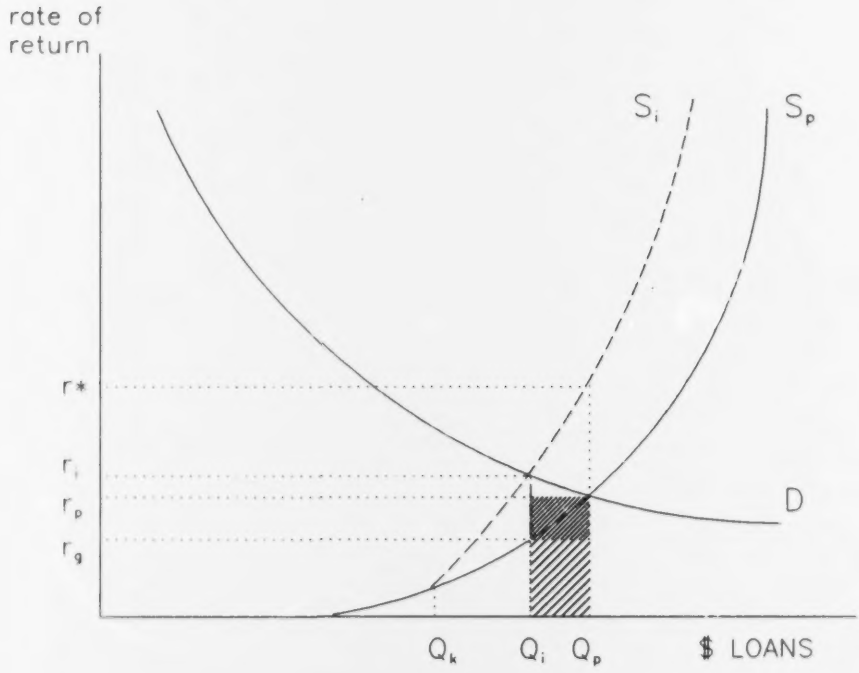
[13] General Accounting Office. *Potential Savings from Direct Student Loans*. GAO/HRD-93-27. November 1992, p. 4.

[14] The issue discussed here is not cash versus credit budget accounting. In theory, the credit budget approach ensures that decisions about guaranteed versus direct loans will be made on a comparable basis, although CBO suggests this may not be the case for guaranteed student loans under current budget rules. See Congressional Budget Office. *Budgeting for Administrative Costs Under Credit Reform*. January, 1992. p. 25.

The market for postsecondary loans discussed in figure 1 is adapted and used to facilitate analysis of the direct lending proposal. Assume that the current Stafford subsidized loan interest payments and Special Allowance Payments (SAPs) provide the lender with a competitive rate of return equal to r_p, as shown in figure 2. The difference between r^* and r_p, default risk caused by not being able to adequately secure the loan with a claim on the borrower's physical property, is eliminated by the loan guarantee (Federal reinsurance). [15]

FIGURE 2. Comparison of Direct versus Privately Provided Loans When Lenders Receive Competitive Return



The private financial sector currently receives interest income from the program equal to the sum of the shaded and lined rectangles in figure 2. This income is calculated as $r_p(Q_p - Q_i)$—the dollars of Federal loans made to students

[15] As discussed earlier in this report, the Federal reinsurance rate is less than 100 percent on defaulted loans in some circumstances. This does not materially affect the discussion because the only risk of nonpayment faced by lenders is a failure to exercise due diligence during the period they hold the loans in their own portfolio. If this risk is significant, it means that the necessary return for lenders is slightly higher than r_p.

multiplied by the competitive rate of return. [16] Since all interest payments are made by the Federal Government, these interest expenses appear as Federal budget outlays.

Now let the Federal Government substitute a direct lending program to provide the same amount of guaranteed student lending, $Q_p - Q_i$. Private lenders are willing to lend this saving to the Federal Government at a lower interest rate, r_g, than the r_p rate at which they are willing to lend to students. This means that Federal interest outlays on guaranteed loans would be $r_g(Q_p - Q_i)$, only the lined rectangle. Direct lending lowers the interest outlays charged to the Federal budget by the shaded rectangle, $(r_p - r_g)(Q_p - Q_i)$. [17]

From where do these reduced interest outlays come? They come from an equivalent reduction in the private sector's interest income. These budget "savings," however, generally are <u>not</u> available to reduce the budget deficit, increase spending, or decrease taxes. This is so because the rate charged by private lenders for a loan, r_p, must exceed the lender's cost of funds by an amount sufficient to cover administrative costs (primarily loan servicing) and credit risk costs (separate from default risk already absorbed by Government). These expenses, which under the current program appear as interest outlays in the Federal budget, under a direct lending program ought to appear as Federal budget outlays for administrative expenses and credit risk costs. Although calculations of "savings" from direct lending have counted administrative expenses as Federal outlays, credit risk costs have been ignored and give the appearance of being a transfer of lender profits to the public sector. [18]

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[16] $Q_p - Q_i$ understates the loans being made by the program. Prior to the Federal program, some privately financed loans to the left of Q_i would be financed at a rate higher than r_p. After program adoption, they are likely to be financed with guaranteed loans. To simplify, these loans are ignored.

[17] Expanding the discussion to include the period when the student is out of school and repaying the loan would not change these results. Under the current system, the combination of the student's interest payment and Government's SAP would provide the financial sector with interest earnings of r_p on their loans. Under a direct loan program, the financial sector would receive r_g on an equivalent amount of loans to the Federal Government. The reduced interest income of the financial sector, the shaded rectangle would appear in the Federal budget in two places: as interest earnings equal to the difference between the student's interest rate and r_g; and as reduced outlays (SAP payments not made, the difference between r_p and the student's interest rate).

[18] A rough calculation of the present discounted value of lender compensation for credit risk costs (0.59 percentage points, see Table 1) on FY 1992 loan volume of $14.8 billion is equal to about $500 million, more than half the reported expected annual cohort "savings" from converting to a direct lending program.

Use of the word "savings" to characterize these hidden Federal costs produced by the switch to direct lending implies that national income would be increased, that the Nation could produce and consume more with the same resources. This is not true. From one perspective, any increased Government spending of these lender "profits" is offset by the private sector's reduced spending. From another perspective, the same amount, $Q_p - Q_i$, of the Nation's pool of scarce savings would be devoted to student loans, whether guaranteed or direct. These education investments would provide the Nation with the same rate of return and contribution to national income measured by the area under the demand schedule lying between Q_i and Q_p.

There may be practical political benefits in switching the accounting of the interest expense from the Federal budget to the private budget, but there are no economic benefits. A primary reason for the public sector to intervene in the private sector's allocation of resources is to increase national income by switching resources from activities valued less to activities valued more. This is accomplished when the decision is made to increase the portion of the Nation's pool of scarce savings devoted to student loans from Q_i to Q_p. The only economic reason to prefer that the delivery of those increased student loans be done by the public sector rather than by the private sector is if the public sector can do it more efficiently, which in this case means performing administrative tasks such as loan screening and loan servicing at a lower per unit cost than the private sector (section III. B.). It has nothing to do with which sector gets to keep lenders' "profits."

This analysis concludes that a guaranteed loan program for which lenders receive a competitive return would generate little in the way of reduced budget outlays if switched to a direct lending program. What then explains the substantial "savings" that have been claimed for direct lending? Two primary possibilities arise: the current program is paying lenders a more-than-competitive return; and the current program incurs administrative costs that are higher than would be experienced under a direct lending program.

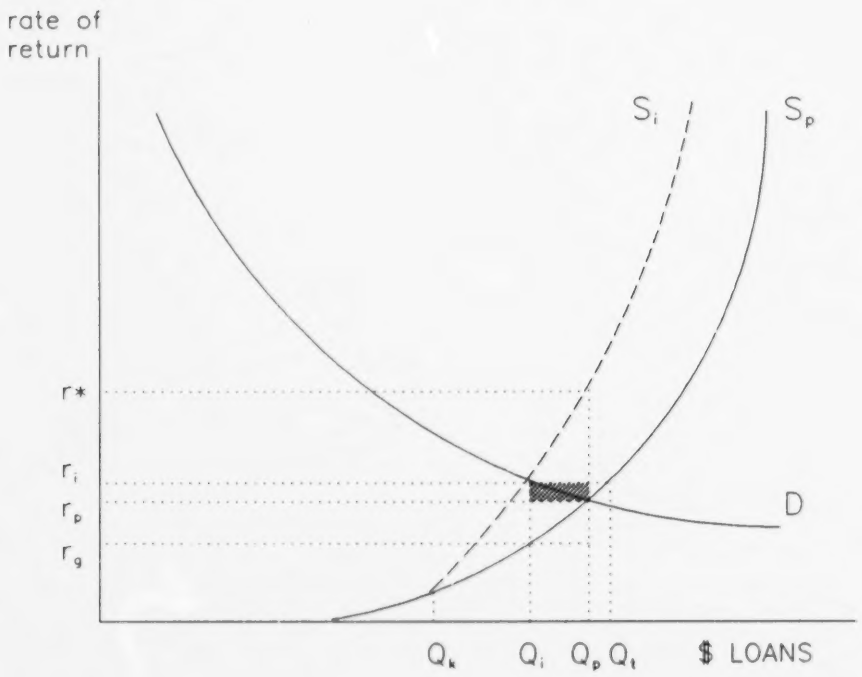
2. Lenders Receive a More-than-Competitive Return

Suppose the interest rate subsidy for student loans is too generous such that the interest rate provided to private lenders actually lies somewhere between r^* and r_p. In figure 3, assume that the interest payment being made to private lenders is actually r_i rather than the desired r_p.

In this case, the Federal Government's interest payments for guaranteed private loans are higher by the shaded rectangle, $(r_i - r_p)(Q_p - Q_i)$, than necessary to induce the financial sector to lend the money to the students. In addition, the more-than-competitive interest rate induces lenders to offer $Q_t - Q_p$ postsecondary loans in excess of the optimal amount necessary to correct for capital market imperfections. Loans to the right of Q_p cost society more in the form of foregone national income than they generate. That is, the loss of

national income measured off of the supply schedule S_p exceeds the gain in income measured off of the demand schedule D.

FIGURE 3. Comparison of Direct versus Privately Provided Loans When Lenders Receive More-than-Competitive Returns



If lenders are receiving a more-than-competitive interest rate, this implies that a significant share of the interest savings claimed for direct lending, the shaded rectangle in figure 3, could be recovered by setting the lender rate at a competitive level. This would not require the program be converted to direct lending. Congressional actions, lender behavior, economic theory, and risk-adjusted spreads each suggest that student loan interest subsidies have, in fact, been too generous over the life of the program.

a. Congressional Actions

Congress has continually adjusted the SAP downward without inducing an appreciable decrease in student access to loanable funds. From 1981 through 1986, the SAP was set at 3.5 percentage points over the bond-equivalent yield

of 91-day Treasury bills. [19] The rate was then lowered to 3.25 percentage points, and, most recently in October 1992, to 3.1 percentage points. These adjustments represent efforts to move the financial sector's interest rate on student loans from r_i toward r_p. A recent study using loan data through 1989 suggests that the SAP margin could be reduced to 3.0 percentage points without significantly reducing the financial sector's willingness to make loans to students. [20]

b. Lender Behavior

Economic theory suggests that, by the time most student loans are sold, they should be expected to sell at a discount. This means that the purchaser pays less than the full principal on the loan, which effectively raises the yield the purchaser will realize. In practice, the secondary markets tend to pay a premium, more than the principal on the loan, which suggests that the interest earnings on these loans exceed the rates available to the financial sector from alternative investment opportunities.

While the student is in school, the risk that the loan will be paid prior to the lender's expectation is very low; the risk of default is non-existent; and servicing costs are very low because the Federal Government makes all interest payments and no expense is required to secure repayments from the student. When a student leaves school, the costs of the loan increase because the risk of default increases; the risk of early repayment (usually through loan consolidation) and the consequent loss of secure income increases; and servicing costs rise because expense is required to secure repayment from the student.

This distinctive profile leads lenders to originate student loans, hold them during the in-school period, and then sell to a secondary agency just prior to the student repayment period. Loans sold soon after origination would be expected to sell at a premium both because the opportunity to receive a higher near-term return is being sold and also because the lender/seller will require reimbursement of origination costs. In contrast, loans sold in the student repayment period would sell at a discount to reflect their lessened future profitability. Experience has been, however, that the secondary market for student loans generally pays full price or more despite the tendency of banks to hold the loans through most of the in-school period.

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[19] The "bond-equivalent" yield is an upward adjustment in the auction yields commonly published in financial newspapers. The upward adjustment takes into account the time at which interest payments are made—at the time of purchase in the case of treasury bills; after a fixed term for most other securities. At interest rates of four percent the difference is about 0.1 percentage points—a significant amount in investment determinations.

[20] General Accounting Office. *Stafford Student Loans: Lower Subsidy Payments Could Achieve Savings Without Affecting Access.* GAO/HRD-92-7. January 1992.

This experience is reinforced by an examination of the purchasing behavior of Sallie Mae, the largest secondary investor in student loans. Its commitments to purchase loans are usually made at the time of loan origination for delivery in three years. Assuming Federal regulatory paperwork is complete, the schedule of prices for the loans ranges from par to premium depending primarily upon the size of loans. In addition, as should be expected, a premium is added for earlier rather than later delivery. For the most part, loans are discounted only if the default rate for the school which receives the proceeds is above a trigger-point of 25 percent, if the required regulatory paperwork is not complete, or if the package of loans being bought contains a disproportionate share of loans from high-default schools. The timing of most sales just before the repayment period means that the lower-profit period is being bought. To pay a premium under these circumstances implies that the student loan interest rate is more than competitive, at least for lenders using Sallie Mae or equivalent secondary market purchasers. [21]

c. Risk-Adjusted Spreads

Further evidence of more-than-competitive returns may be obtained from a comparison of risk-adjusted spreads on student loans with other loans. The first step is to subtract from the loan rates charged by the banks the cost to the banks of borrowing the money for the period of time necessary to fund the loan—what is termed a matched cost of funds. [22] The rate charged for a loan must exceed the matched cost of funds by an amount sufficient to cover operating and credit costs as well as provide a profit to the lender. Because these non-borrowing costs differ for different loan lines, their spreads also differ.

For example, the typical adjustable rate residential mortgage is generally priced about 2.5 percentage points above its matched cost of funds. Fixed-rate mortgage loans tend to have smaller spreads of 2.0 to 2.3 percentage points. Commercial loans may receive 3.0 to 3.5 percentage points over their matched

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[21] Sallie Mae, for its part, cannot be said to be subsidizing these loans with above-market prices since the company is highly profitable, with net returns to equity well in excess of those of even other Government-sponsored enterprises.

[22] Matching up a loan rate with an average cost of funds, rather than the cost of borrowing only for long enough to match the loan term, would bias the results for two reasons. First, it would understate the spread (and profitability) of short-term loans because interest rates on short-term securities are generally lower than on long-term securities. Second, it would introduce different repayment time paths and cause spreads to be sensitive to changes in interest rate levels over time.

For short-term loans, including student loans on which the rate is adjusted every three months, it is sufficient to use the cost of three-month certificates of deposit for a match. For longer loans, such as 30-year, fully amortizing fixed-rate mortgages which may be repaid early, a more sophisticated "duration" match would be more appropriate.

cost of funds. Student loans have enjoyed spreads of 2.7 to 3.0 percentage points in recent years. This would appear to place student loan yields in a competitive range with other types of loans.

This information is not, however, adequate to assess the profitability of student loans relative to other loans. It is necessary to estimate the costs and risks associated with these lending lines, add them to the matched cost of funds, and deduct the sum from the loan rates to obtain risk-adjusted spreads. Any effort to make such adjustments requires quite a few simplifying assumptions, some of which undoubtedly would be made differently by other analysts. The bottom line is that there is no "correct" answer. The purpose here is to suggest general orders of magnitude rather than precision.

Student loans have cost advantages over other types of lending. First, they are mostly protected from default risk by the guarantee. Some default risk may be incurred through failure to follow "due diligence" regulations, although such operations failure should be within the power of lenders to control. [23] Second, for a commercial bank, savings association, or credit union, whose main liabilities are short-term deposits, there is significant protection from interest rate risk, especially compared to longer term mortgage and commercial lending. Third, there is little liquidity risk because of the large secondary market; in particular, the participation of Sallie Mae through purchase commitments and warehousing arrangements makes it easy, relative to other types of loans, for lenders to maintain student lending without much alteration of the profitability or risk characteristics of their balance sheets. [24]

Table 1 extends U.S. Department of Education (ED) 1985-89 estimates of the risk-adjusted spread for student loans through 1993. [25] The interest rate

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[23] Some have suggested these loans may be subject disproportionately to "regulatory risk" caused by the lag between the adoption of legislation and the adoption of final regulations to implement the legislation. During this time period, lenders are dependent upon good-faith interpretations, which may prove to be false.

[24] Student loans may also serve an overall portfolio function for banks. The spread between most loan rates and their cost of funds tends to widen when interest rates are high, presumably because of higher credit risk during such periods, and flatten when rates are low. Student loans, however, do the reverse because the deposits financing them tend to rise relative to the T-bills indexing them when rates are high, and vice versa.

[25] Data for 1985 through 1989, except for servicing costs, are from U.S. Department of Education. Office of Planning, Budget & Evaluation. *Lender Profitability in the Student Loan Program.* April 1991. There are limits to this analysis: there may be reasons other than profitability for undertaking a line of lending, including the possibility of marketing other products to borrowers in the future and meeting requirements of the Community Reinvestment Act. In

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is the bond-equivalent yield of the 91-day Treasury bill plus 3.25 percentage points through 1992 and plus 3.1 percentage for 1993, in accord with changing program rules. Because that rate can change quarterly, the matched cost of funds is the interest rate for 3-month certificates of deposit at banks plus costs of issuance.

TABLE 1. Comparison of Risk-Adjusted Spreads: Student Loans and Adjustable Home Mortgage Loans

	1985	1986	1987	1988	1989	1990	1991	1992	1993
Student Loan Interest Rate	10.98	9.23	9.02	9.92	11.36	11.01	8.82	6.85	6.80
Costs:									
Matched Funds	7.90	6.63	6.50	7.15	8.42	8.32	5.99	3.80	3.90
Servicing:									
Sallie Mae Estimates	0.84	0.84	0.85	0.77	0.69	0.67	0.66	0.66	0.66
Lenders (Sallie Mae + .34)	1.18	1.18	1.19	1.11	1.03	1.01	1.00	1.00	1.00
Default Risk	0.00	0.00	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Prepayment Risk	0.45	0.48	0.46	0.52	0.55	0.55	0.55	0.55	0.25
Risk-Adjusted Spreads:									
Student Loans	1.45	0.94	0.83	1.10	1.32	1.09	1.24	1.46	1.61
Adjustable Home Mortgages[a]	0.67	0.34	0.60	0.74	0.77	0.74	0.84	0.75	0.62
Ginnie Maes[a]	1.20	0.43	0.67	0.95	0.63	0.34	0.42	0.63	0.70

[a] Servicing costs for adjustable home mortgages varied from 1.09 to 1.24 percentage points, default risk was assumed constant at 0.25, and prepayment risk varied from 0.59 to 0.74. Servicing costs for Ginnie Maes varied from 0.17 to 0.23, default risk was zero, and prepayment risk was identical to adjustable home mortgages.

Sources of data: ED, 1985-89; thereafter SLMA for servicing; Federal Reserve Bulletin for Treasury rates; CBO for 1993 forecasted rates.

Servicing costs, although much lower during the in-school period, are averaged across maturities for this analysis. The General Accounting Office estimates servicing costs of about 1.0 percentage point in 1991, which is the sum of Sallie Mae's reported 1991 servicing cost of 0.66 percentage points plus 0.34 percentage points for a contract servicer's profit margin. [26] Average servicing costs for the efficient lender are assumed to decline over time on the same

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[25](...continued)
addition, the guarantee and interest rate risk characteristics of student loans may make them attractive to banks seeking to reduce the total risk of their overall asset portfolio, regardless of yield. Liquidity risk is not directly measurable using this analysis. Finally, economies of scale may differ across lenders so that various costs are lower on a per loan basis for some than others.

[26] Sallie Mae's servicing costs decreased steadily as the corporation gained experience and economies of scale, from 1.1 in 1980 to 0.66 in 1991. Sallie Mae. *Financing Higher Education: Annual Report 1991.* Preliminary data indicate servicing costs may have risen in 1992 to as much as 0.76.

"learning" curve as Sallie Mae's (see row 3 in table 1), moving from 1.18 percentage points in 1985 to 1.0 percentage point in 1993 (see row 4 in table 1).

Prior to 1987, the risk of default was considered to be negligible, and is listed as zero for 1985 and 1986. After the 1986 adoption of "due diligence" requirements for monitoring and collecting loans, lenders set aside reserves that imply expected default costs of about 0.04 percentage points.

Prepayment risk (that, when interest rates fall below the contract rate on a student loan, a student will repay or consolidate the loan prior to the lender's original expectation) requires lenders to reinvest funds at rates that are below expectations. ED estimated this risk at approximately 0.5 percentage points from 1985-1989. This estimate reflected a program structure in which students repaid at a fixed rate of 8 percent, and which adjusted upward to 10 percent after the fourth year of repayment. Although "overpayments" were rebated at the end of a year, the need to pay at a fixed rate when interest rates were declining, plus the automatic rise in the rate after four years, gave students strong motive to refinance their loans.

Prepayment risk should be dramatically reduced by the program changes beginning in 1993 that require students to pay an adjustable rate for their loans, up to a ceiling rate of 9 percent. To adjust for this change, ED's estimate of about 0.5 for prepayment risks is halved to 0.25 percentage points.

When the cost of funds, servicing costs, default risk, and prepayment risk are deducted from the student loan interest rate, a pattern of reasonably healthy risk-adjusted spreads emerges. The data for 1985-89 demonstrate that student loan risk-adjusted spreads usually have been in the range of 0.9 to 1.3 percentage points, lower but more stable than those of, for example, credit cards. The post-1989 data show an increasing risk-adjusted spread, attributable in 1992 primarily to a sharply lower cost of funds, and in 1993 to a greater reduction in prepayment risk (0.3 percentage points) than in the SAP portion of the interest rate (0.15 percentage points).

Finally, these spreads are compared to risk-adjusted spreads for adjustable-rate home mortgages and for mortgage-backed securities backed by the Government National Mortgage Association (Ginnie Mae). Adjustable rate mortgages are secured (by a home, or by insurance which is sometimes Federal); are somewhat protected from interest rate risk; and are highly liquid due to the operations of federally chartered enterprises. An "idealized" adjustable rate of 2.5 percentage points over the 1-year Treasury note is used in order to abstract from the phenomenon of mortgage "teaser" rates (below-cost rates which are temporary). The home mortgage risk-adjusted spread is much lower than student loans, consistently well under 1.0 percentage point. This is due partly to higher costs associated with prepayment, but mostly due to lower interest rate spreads at the outset.

Some might argue with these risk-adjusted spreads for adjustable home mortgages on the grounds that the servicing costs are dominated by high-cost

lenders (mainly small banks). For that reason, risk-adjusted spreads are also calculated for Ginnie Maes. While they are not protected from interest rate risk, they are fully guaranteed against defaults and are highly liquid. Again, the risk-adjusted spread is much lower than for student loans, consistently under 100 basis points.

The general conclusion of this exercise in risk-adjusted spreads is in line with the other evidence: that rates on student loans have been, and probably still are, set higher than necessary to maintain a desired level of lending for higher education. Further, although the recent program interest rate reduction was intended to lower lenders' net yield, the reduction was largely offset by the reduction in prepayment risk attributable to the change from a fixed to adjustable student rate. Room probably remains to acquire more real reductions in interest outlays. At a minimum, the GAO's previous recommendation of a 3.00 percentage point spread over Treasury bills does not appear to be unreasonable, and may be too large (see footnote 20).

B. ADMINISTRATIVE OUTLAYS

The direct loan study cited in footnote 20 to a large extent reassigned administrative costs, making them a neutral factor in the analysis of direct versus private lending costs. This treatment seems reasonable—administrative expenses that under the current program are recorded in the Federal budget as interest outlays to compensate private lenders for these expenses, would, under a direct lending program, be reassigned to their own outlay line in the Federal budget. No genuine budget or economic change occurs unless the per unit administrative cost differs between direct and private lending programs.

Little is known about the relative administrative costs of public versus private provision of student loans. Some duplication of administrative effort might be eliminated by a direct lending program. State guaranty agencies receive an administrative cost allowance from the Federal Government as well as a student insurance fee ranging from zero to three percent of each loan, plus they receive 30 percent of collections on defaulted loans. As noted earlier, these agencies do not so much provide insurance as service the Federal Government's guarantee by exercising prescribed oversight of lender performance. Any adjustments to this system are not, of course, dependent upon a switch to direct lending.

Two factors might be important in judging the likelihood of genuine administrative cost savings from switching to a direct lending program. First, many firms have entered the market to automate, computerize, and streamline loan servicing, spurred to some extent by the numerous potential buyers (private lenders) of these services under the current program. This competitive market has generated a steadily declining servicing cost per loan, as evidenced by Sallie Mae's per unit decrease from 1.1 percentage points in 1980 to 0.66 in 1991. It is uncertain whether creation of a monopoly lender (the Federal Government) would be as successful in stimulating a competitive servicing market.

Second, the incentives facing public and private managers are very different. The private manager's rate of wage increase and the return to investors in private lending and secondary market institutions are dependent upon producing a profit, which provides strong motivation for cost minimization. In contrast, the public manager generally does not benefit from cost minimization; in fact, higher cost generates a larger budget and more people to manage,-factors often associated with a public manager's wages. The impact of these incentives on cost might be significant even if a direct lending program continued to contract for loan servicing.

Nonetheless, concerns have been raised about excessive salaries and benefits paid to some managers at Sallie Mae and high returns earned by stockholders of some private lenders and Sallie Mae. [27] If, in fact, excessive wages and returns exist, they probably result from two forces. First, as already discussed, the interest subsidy has probably been too generous over the years, providing lenders with an interest rate in excess of r_p. Second, lenders and secondary marketers moved vigorously to reduce administrative costs, particularly servicing cost per loan.

Rather than consider these facts to represent a case for direct loans, one might consider that they represent a successful effort to "privatize" a public service. The public sector determined that an adjustment was necessary in the allocation of the Nation's resources, in this case using more of the pool of scarce savings for postsecondary loans. The job of delivering the loans was given to the private, rather than the public, sector perhaps partly in the expectation that the former might perform it at least cost.

When the situation is viewed in this way, one response to "excess" returns earned by private providers of student loans might be to make certain that procedures are in place that will require private providers to share the wealth with the public sector. In this case, that means reducing the interest subsidy to reflect the fact that competition has reduced administrative costs and lowered r_p. The real problem here might be an understandable lag in the oversight function in the legislative and executive branches, such that the private sector has not been forced as quickly as some might prefer to share above-normal returns produced by their cost reduction effort. Oversight is a notably difficult job, information is difficult to collect and analyze, and the private providers may place obstacles in the path of adjustment. Nonetheless, it is the job of a vigilant public sector to force the issue and fairly share the fruit of the private sector's efforts. [28]

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[27] Two recent articles discuss this issue. Matthew Morrissey. Banking on Students. *National Journal*. February 6, 1993; and Jack Anderson and Michael Binstein. Bypass the Banks in Student Loans. *Washington Post*. January 10, 1993.

[28] The organization that has performed the calculations showing interest "savings" from moving to a direct loan program has itself cautioned Congress to

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It is to be expected, however, that private lenders would make efforts to maintain the status quo; it is certainly not the job of private business to give away the hard-earned benefits of cost reduction. The public versus private responsibilities of Sallie Mae in this regard are less clear cut. It is probably not unreasonable to expect that a GSE such as Sallie Mae, in exchange for the backing of the Federal Government implied by its charter and special privileges, be more forthcoming than private lenders in alerting the Federal Government to changing financial and cost considerations in the market for which it is an acknowledged expert. It is, at least in part, this Federal backing that allows Sallie Mae to borrow at near the Federal Government rate. If some attention were given to restructuring the relationship between Sallie Mae and the Federal Government, the possibility that the secondary market for student loans is mature and no longer in need of GSE support should be considered.

In conclusion, the reduction in interest outlays claimed for direct lending probably is not attributable to lowered administrative costs. It appears that the reduction is attributable primarily to the current program providing lenders a more-than-competitive interest rate, a situation that can be remedied with or without a switch to direct lending.

IV. REDUCING COSTS THROUGH BETTER TARGETING

Economic theory says loans should be advanced to students up to the point at which the last dollar of postsecondary loan generates a return equal to the cost of borrowing the funds. It is just as much a waste of loan funds to lend money beyond this point to the excellent student who pursues education beyond any reasonable extra benefit as it is to lend any funds at all to the student who has no chance whatever of converting postsecondary education into increased future earnings. In the former case, the student may enjoy staying in school, but society might not want to subsidize what has become consumption rather than investment in productive human capital.

In the second case, any subsidy would be better directed to more appropriate and structured publicly funded education or training. For example, if investment in these students' education provided substantial external benefits to society, loans might be scrapped and the program restructured as a grant or income contingent repayment in order that the student not be burdened with hard-to-pay debt incurred for society's benefit. The practical difficulties of incorporating these concerns into program restructuring ought not be minimized. But failure to acknowledge the issues will make it difficult to reduce program costs and improve national welfare.

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[28](...continued)
move carefully. "But the inventory of known problems in the Department's [Education's] administration of guaranteed student loans raises questions about its ability to adequately manage a direct lending program." General Accounting Office. High Risk Series. *Guaranteed Student Loans*. GAO/HR-93-2, December 1992, pp. 30-31.

The factors that determine the shape of demand schedule D in figure 3 are many and interact in a poorly understood manner. Nonetheless, rates of return from investment in education do seem to be related to such characteristics as parental education levels, aptitude, and self discipline, as well as quality and extent of prior preparation. [29] Yet, eligibility for the Stafford subsidized loan program is determined solely by income and the willingness of a postsecondary school to admit a student. This means that loans may be made for educational investments all along the demand schedule, and not only for those that are the economically efficient targets—those investments which are in students who would otherwise underinvest in postsecondary education due to capital market imperfections and which are depicted as lying between Q_i and Q_p on the demand curve in figure 3.

To this point, this report has proceeded on the assumption that guaranteed student loans successfully target economic investments. This section suggests that the programs also make noneconomic investments. It might be good public policy to improve targeting by eliminating loans made for investments to the right of Q_p, those with high default risk, and to the left of Q_i, those which would be made in the absence of Federal support.

A. LOANS WITH HIGH DEFAULT RISK

Federal payments on defaulted loans rose from $117 million in FY 1979 to $3.6 billion in FY 1991, an all-time high before receding to $2.9 billion in FY 1992. The proposal to convert to a direct lending program is not aimed at reducing these default costs. One must look elsewhere to reduce these costs. Loans to the right of Q_p in figure 3 are associated with successively lower rates of return and future income, making them increasingly likely prospects for default. Thus, eliminating these loans would not only reduce interest outlays but would reduce default costs more than proportionately.

Lending to the right of the optimal amount, Q_p, is attributable to three forces. First, a more-than-competitive return provided to lenders induces them to make $Q_t - Q_p$ more than the optimal amount of guaranteed loans. Accurately targeting r_p would eliminate these loans.

Second, a student's loan subsidy is larger than the $r^* - r_p$ provided to compensate for default risk. The student's borrowing rate is set lower than r_p, and has the effect of extending loan demand beyond the optimal amount, Q_p. This additional subsidy appears to be consistent with use of postsecondary education to produce the external benefits society desires to obtain from increasing investment in education. If it is believed that high defaults are associated with substantial external benefits to society, then default costs may arguably be accepted as a normal cost of achieving program goals. It would be

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[29] See Becker, *Human Capital*, chapter III for a conceptual discussion of the role of these factors and chapter IV for an empirical analysis of their importance.

unfair to expect students not receiving adequate private returns to be burdened with debt used to provide benefits to society. Such students might be better served through a grant or income contingent repayment program.

In contrast, a decision to reduce Stafford subsidized loan outlays for interest expense and defaulted principal on loans beyond Q_p might imply that these loans are not producing external benefits, that such benefits might be obtained more efficiently in some other program. Such a decision would suggest raising the student borrowing rate to r_p in order to eliminate these loans.

Third, the analysis of this program has proceeded as though students make informed and reasonable economic decisions, that they invest only if the expected private rate of return from investing in education exceeds the subsidized cost of borrowing. In fact, it is very difficult for students to make such an evaluation in other than a broadly intuitive sense. Furthermore, the program provides the institution most likely to assist students with this evaluation, the postsecondary school, with incentives to encourage students to overestimate the private rate of return they compare to their subsidized borrowing cost.

The administrative structure of the FFEL program almost certainly works to direct loans to many students whose preparation makes them dubious prospects for success in the postsecondary work they undertake. Many schools face difficulty in finding enough students to fully utilize their facilities. Stafford subsidized loans increase demand for schools' services by reducing students' effective cost. Under the current program structure, the schools control access to the application process for the loan program. Thus, the schools have both an incentive to admit students whom they suspect may be unlikely to be successful in their program, and the opportunity to encourage these students to apply for loans.

This combination of student informational deficiencies and school incentives suggests that loans will be made for which the private rate of return actually lies below the subsidized borrowing cost. In theory, these loans are likely to be associated with the highest rates of default. Such loans should be considered overinvestments in postsecondary education, and occur either because students with inappropriate preparation receive loans or because qualified students receive excessive loans.

The political and administrative costs would be high should the Federal Government make itself responsible for assessing the adequacy of millions of students' preparation as a condition for a loan. Postsecondary institutions, however, already judge the likelihood of a student's success in their school by using aptitude test scores, secondary school grades and other achievements, and letters of recommendation. To better target loan recipients, schools might be induced to use this information, in concert with existing eligibility criteria, to screen students and eliminate the loans that fall to the right of the point where the student's borrowing rate intersects demand schedule D (which, if the

student's borrowing rate has been raised to r_p, would be for loans to the right of Q_p). One way to bring this about would be to make the schools responsible for paying a portion of the default cost imposed on the Federal Government by each student who attended their school with a Stafford subsidized loan. [30]

A cost-sharing arrangement of this sort might have undesirable side effects: some schools with high default rates might encounter financial difficulties that cause them to close, even though they are providing quality programs for lower-income students; and some schools might decide not to admit some lower-income students with high returns because they assess improperly the student's expected rate of return. Both concerns relate to the program's ability to serve the lower-income target population. Two responses seem appropriate to these observations.

First, the object is not to shift the entire cost of defaulted loans to the schools. That would penalize the schools for problems over which they have no control, such as "deadbeats," economic recessions, and unexpected illness, that affect the future income (and repayment prospects) of all students. Rather, the object is to increase the schools' incentive to grant loans primarily to those students likely to succeed. The penalty would remove a portion of the financial benefit that accrues to the school from granting loans with low probability of repayment, thereby inducing a reduction in default costs.

Second, such concerns are in some sense incompatible with the goal of reducing program costs while serving the target population. The fact is that growing default costs are to some extent a product of the extension of loans to students whose potential for private benefit is so lacking that the probability of loan repayment is known to be low at the time the loans are made. At some point, inconsistent goals must be acknowledged. It is not possible to reduce default costs without enacting administrative procedures to eliminate some of these high-risk loans.

It could be argued that it is undesirable public policy to entice into a loan commitment a student whose preparation is insufficient to make the loan a successful investment, and which might impose a substantial debt that proves to be extremely difficult to repay. It is far better to structure the program to make loans with reasonable prospects of repayment. Those likely to be burdened with unrepayable loans might better be served by more structured publicly assisted education or training programs.

Arguably, without such changes the program not only will be economically inefficient (in the sense of allocating scarce saving to activities that do not provide adequate returns to society) and costly (in terms of Federal outlays), but

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[30] Requiring schools to share in the payment of default costs is discussed in Congressional Budget Office (1991), p. 47. The only penalty now imposed on schools is removal from the program if the default rate on their loans in repayment status exceeds 25 percent.

will also be unable to deliver on its distributional goals of aiding a broad spectrum of lower-income individuals.

B. LOANS THAT REPLACE PRIVATE CAPITAL

Some students are likely to invest in postsecondary education in the absence of Federal subsidy because their ability and self-discipline give them a high expected rate of return and enable them to recognize that such investment is to their advantage. These investments lie to the left of Q_i in figure 3. Many lower-income students still are likely to underinvest, however, because they are likely to be dependent upon private lenders for at least a portion of their investment. These investments lie between Q_i and Q_k where borrowing costs are measured off S_i rather than S_p.

For the needs-tested Stafford subsidized loan program, at least a portion of each student's postsecondary loans in the Q_i to Q_k range would not have been undertaken in the absence of the subsidy. Although these students' high ability and self-discipline may make them relatively low default risks, high financing costs preclude their making as large an investment as desired. At least some of the Federal subsidy given for their loans induces additional investment. For those loans that induce no additional investment, as well as those beyond Q_p, eliminating the subsidy would reduce program costs and would increase national income.

Program costs also could be reduced by eliminating loans to the left of Q_k. In this case, however, national income would not be increased, but income would be transferred from students and schools to the Federal taxpayer. These loans are likely to be made by the three FFEL programs that are not needs tested—SLS, PLUS, and Stafford unsubsidized loans. Many more of these students' investments are likely to lie to the left of Q_k. These are investments whose high rate of return reflects students' ability, quality preparation, and self discipline, but whose financing costs are low because they have family and personal resources that make it unnecessary to resort to private lenders. [31] The entire desired postsecondary investment can be financed from S_p, without Federal subsidy, because they and their families do not require compensation for the default risk inherent in unsecured loans.

For these investments, Federal loans are wasted in the sense that they are not associated with additional postsecondary investment. Students and families who use these loans but could finance the education without assistance are, in effect, using the guaranteed loan programs to earn arbitrage profits. They are paying the Federal Government a subsidized rate for the loan while their own funds remain invested in assets yielding higher returns.

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[31] See Gary Becker. *Human Capital*, p. 102-04 for a discussion of the increasing cost of financing as one moves from family, to personal, to market savings.

Prior to 1993, the SLS and PLUS components of the FFEL program provided loans to independent students and parents of students. In 1992, these two programs accounted for 23.7 percent of FFEL loans. Beginning in 1993, a Stafford unsubsidized loan program will be available to students without regard to financial need. ED projects that the 1998 loan volume of these three non-need tested programs will be $9.7 billion, 39.7 percent of total student loan volume. [32] The potential for disbursing unproductive loans seems to be increasing, a trend contrary to the stated desire to reduce program cost.

V. CONCLUSION

This analysis suggests that the costs of the current guaranteed lending program for postsecondary education can be reduced in three ways. First, eliminate more-than-competitive returns to private lenders. Second, reduce administrative cost. Third, reduce default costs. The first can be accomplished with or without direct lending. The second is more likely to be increased than decreased by direct lending.

The third—reducing default costs—is advanced by explicit understanding that subsidies intended to produce benefits to society cannot be repaid by students who fail to receive gains from the investment commensurate with its cost. Cost reductions in such cases cannot be accomplished either by direct or guaranteed private lending. This implies a restriction of loans and a completely separate subsidy structure, such as grants or income contingent repayment plans.

If the current program were providing competitive returns to lenders, national income would not be increased by conversion to a direct lending program. Budget "savings" would amount to no more than the failure of Federal bookkeeping to record outlays for taxpayers' absorption of risk. Any increased funding available for public spending would be exactly offset by reduced private sector income.

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[32] U.S. Department of Education. *Loan Volume Update* All 12 Months of FY 1992. Guaranteed Student Loan Programs: Stafford/SLS/PLUS.* Prepared by Office of Student Financial Assistance [1992].